WHAT IS CLAIMED IS:

1. A light-emitting device comprising a transparent conductive semiconductor substrate, and a light-emitting layer portion composed of a compound semiconductor and bonded on one main surface of the transparent conductive semiconductor substrate while placing a substrate-bonding conductive oxide layer composed of a conductive oxide in between; and

further comprising a contact layer for reducing junction resistance of the substrate-bonding conductive oxide layer, disposed between the light-emitting layer portion and the substrate-bonding conductive oxide layer so as to contact with the substrate-bonding conductive oxide layer.

2. The light-emitting device as claimed in Claim 1, wherein a metal electrode for applying voltage to the light-emitting layer portion is formed on the main surface on the non-bonding side of the transparent conductive semiconductor substrate so as to cover a partial area of the main surface; and

the substrate-bonding conductive oxide layer has a primary region right under the metal electrode and the residual secondary region, and the contact layer is formed with an ratio of formation area larger in the secondary region than in the primary region.

3. The light-emitting device as claimed in Claim 1, wherein the main surface of the light-emitting layer portion opposite to that facing to the transparent conductive semiconductor substrate is covered with the electrode-forming conductive oxide layer also available as a transparent electrode.

4. The light-emitting device as claimed in Claim 3, wherein a contact layer for reducing junction resistance of the electrode-forming conductive oxide layer is disposed between the electrode-forming conductive oxide layer and the light-emitting layer portion so as to contact with the conductive oxide layer.

5. The light-emitting device as claimed in Claim 4, wherein a metal electrode is formed so as to cover a part of the electrode-forming conductive oxide layer, and so as to allow the region of the electrode-forming conductive oxide layer around the metal electrode to serve as a light extraction plane.

6. The light-emitting device as claimed in Claim 5, wherein the electrode-forming conductive oxide layer is formed on the n-type-layer side of the light-emitting layer portion having a p-n junction formed therein.

7. The light-emitting device as claimed in Claim 5,

wherein the electrode-forming conductive oxide layer has a primary region right under the metal electrode and the residual secondary region, and the contact layer is formed with an ratio of formation area larger in the secondary region than in the primary region.

8. The light-emitting device as claimed in Claim 2, wherein the contact layer is not formed in the primary region.

9. The light-emitting device as claimed in Claim 2, wherein at least formation area and non-formation area of the contact layer are interlaced in the secondary region.

10. The light-emitting device as claimed in Claim 1, wherein a contact layer for reducing junction resistance of the substrate-bonding conductive oxide layer is disposed between the transparent conductive semiconductor substrate and the substrate-bonding conductive oxide layer so as to contact with the substrate-bonding conductive oxide layer.

11. The light-emitting device as claimed in Claim 1, wherein the transparent conductive semiconductor substrate is bonded individually on both sides of the light-emitting layer portion while individually placing the substrate-bonding conductive oxide layer composed of a conductive oxide in

between, and the contact layers are formed so as to contact with the individual substrate-bonding conductive oxide layers.

12. The light-emitting device as claimed in Claim 1, wherein the conductive oxide layer is composed of ITO.

13. The light-emitting device as claimed in Claim 1, wherein the transparent conductive semiconductor substrate is composed of any one of GaP, ZnO, SiC and AlGaAs.

14. The light-emitting device as claimed in Claim 1, wherein the contact layer is composed of a compound semiconductor containing no Al at the junction interface with the conductive oxide layer, and having a band gap energy of less than 1.42 eV.

15. The light-emitting device as claimed in Claim 14, wherein the compound semiconductor composing the contact layer has a composition of $In_xGa_{1-x}As$ ($0<x\leqq 1$) at the junction interface with the conductive oxide layer.

16. The light-emitting device as claimed in Claim 1, wherein the conductive oxide layer is an ITO layer; and

the contact layer has a composition of $In_xGa_{1-x}As$ ($0<x\leqq 1$) at the junction interface with the conductive oxide layer, and has

an In concentration profile continuously decreasing as receding from the ITO layer in the thickness-wise direction.

17. The light-emitting device as claimed in Claim 1, wherein the light-emitting layer portion or the transparent conductive semiconductor substrate is bonded to the contact layer on the main surface thereof opposite to that contacting with the conductive oxide layer, while placing an intermediate layer in between, and the intermediate layer is composed of a compound semiconductor having a band gap energy intermediate between those of the light-emitting layer portion or the transparent conductive semiconductor substrate and the contact layer.

18. The light-emitting device as claimed in Claim 17, wherein the light-emitting layer portion is composed of $(Al_xGa_{1-x})_yIn_{1-y}P$ (where , $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$), and the intermediate layer is formed so as to contain at least any one of AlGaAs layer, GaInP layer and AlGaInP layer.

19. A method of fabricating a light-emitting device which comprises a transparent conductive semiconductor substrate, and a light-emitting layer portion composed of a compound semiconductor and bonded on one main surface of the transparent conductive semiconductor substrate while placing a

substrate-bonding conductive oxide layer composed of a conductive oxide in between; and further comprises a contact layer for reducing junction resistance of the substrate-bonding conductive oxide layer, disposed between the light-emitting layer portion and the substrate-bonding conductive oxide layer so as to contact with the substrate-bonding conductive oxide layer; comprising:

a light-emitting layer portion growth step for epitaxially growing the light-emitting layer portion composed of a compound semiconductor on a first main surface of a light-emitting-layer-growing substrate;

a contact layer forming step for forming a layer intended for becoming the contact layer for reducing junction resistance with the substrate-bonding conductive oxide layer;

a substrate-bonding conductive oxide layer forming step for forming the substrate-bonding conductive oxide layer on the bonding surface side of the light-emitting layer portion and/or the transparent conductive semiconductor substrate;

a bonding step for bonding the light-emitting layer portion and the transparent conductive semiconductor substrate while placing the substrate-bonding conductive oxide layer in between, to thereby produce a substrate bond in which the layer intended for becoming the contact layer is disposed so as to contact with the substrate-bonding conductive oxide layer; and

a separating step for separating the

light-emitting-layer-growing substrate from the substrate bond.

20. The method of fabricating a light-emitting device as claimed in Claim 19, wherein in the contact layer forming step, a GaAs layer is formed as the layer intended for becoming the contact layer, an ITO layer as the substrate-bonding conductive oxide layer is then formed so as to contact with the GaAs layer, and the layers are annealed so as to diffuse In from the ITO layer into the GaAs layer to thereby form the contact layer as an In-containing GaAs layer.

21. A method of fabricating a light-emitting device which comprises a transparent conductive semiconductor substrate, and a light-emitting layer portion composed of a compound semiconductor and bonded on one main surface of the transparent conductive semiconductor substrate while placing a substrate-bonding conductive oxide layer composed of a conductive oxide in between; comprising:

a light-emitting layer portion growth step for epitaxially growing the light-emitting layer portion composed of a compound semiconductor on a first main surface of a light-emitting-layer-growing substrate;

a substrate-bonding conductive oxide layer forming step for forming by sputtering an amorphous substrate-bonding conductive oxide layer on the bonding surface side of the

light-emitting layer portion and/or the transparent conductive semiconductor substrate;

a bonding step for bonding the light-emitting layer portion and the transparent conductive semiconductor substrate while placing the substrate-bonding conductive oxide layer in between, to thereby produce a substrate bond; and

a separating step for separating the light-emitting-layer-growing substrate from the substrate bond.

22. A method of fabricating a light-emitting device comprising:

a light-emitting layer portion growth step for epitaxially growing the light-emitting layer portion composed of a compound semiconductor on a main surface of a light-emitting-layer-growing substrate;

a separating step for separating the light-emitting-layer-growing substrate from the light-emitting layer portion;

a transparent conductive oxide layer forming step for covering a separation-side main surface, which is defined as the main surface on the light-emitting layer portion side exposed after the separation of the light-emitting-layer-growing substrate, with a transparent conductive oxide layer also available as a transparent electrode for applying voltage to the light-emitting layer portion; and

a contact layer forming step for forming a layer intended for becoming a contact layer for reducing junction resistance of the transparent conductive oxide layer on the separation-side main surface prior to the transparent conductive oxide layer forming step.

23. The method of fabricating a light-emitting device as claimed in Claim 22, further comprising a bonding step for producing a substrate bond by bonding a conductive substrate to the light-emitting layer portion on the main surface thereof opposite to that contacting with the light-emitting-layer-growing substrate.

24. The method of fabricating a light-emitting device as claimed in Claim 23, wherein the conductive substrate is bonded to the light-emitting layer portion while placing a metal layer intended for a reflective layer in between.

25. The method of fabricating a light-emitting device as claimed in Claim 24, wherein the conductive substrate is an Si substrate or a metal substrate.

26. The method of fabricating a light-emitting device as claimed in Claim 24, wherein the reflective layer is an Au-base metal layer.

27. The method of fabricating a light-emitting device as claimed in Claim 24, wherein the conductive layer is an Si substrate, the reflective layer is an Au-base metal layer contacting with both of the light-emitting layer portion and the Si substrate, and the Si substrate is bonded to the light-emitting layer portion while placing the Au-base metal layer in contact with the Si substrate in between by bonding annealing at 80°C to 360°C, both ends inclusive.

28. The method of fabricating a light-emitting device as claimed in Claim 27, wherein after the bonding annealing, the transparent conductive oxide layer is grown by sputtering on the separation-side main surface of the transparent conductive oxide layer.

29. The method of fabricating a light-emitting device as claimed in Claim 28, wherein the transparent conductive oxide layer is formed as an amorphous oxide layer.

30. The method of fabricating a light-emitting device as claimed in Claim 22, wherein the transparent conductive oxide layer is an ITO layer.

31. The method of fabricating a light-emitting device as

claimed in Claim 22, wherein a GaAs layer is formed as the layer intended for becoming the contact layer, an ITO layer as the transparent conductive oxide layer is then formed so as to contact with the GaAs layer, and the layers are annealed so as to diffuse In from the ITO layer into the GaAs layer to thereby form the contact layer as an In-containing GaAs layer.

32. The method of fabricating a light-emitting device as claimed in Claim 31, wherein the conductive substrate is an Si substrate, the Si substrate is then bonded to the light-emitting layer portion while placing an Au-base metal layer in contact with the Si substrate in between by bonding annealing at 80°C to 360°C, both ends inclusive, and thereafter the annealing for diffusing In into the GaAs layer is carried out.

33. The method of fabricating a light-emitting device as claimed in Claim 32, wherein the annealing for diffusing In into the GaAs layer is carried out at 600°C to 750°C, both ends inclusive, for 5 seconds to 120 seconds, both ends inclusive.

34. A light-emitting device comprising a conductive substrate, and a light-emitting layer portion composed of a compound semiconductor and bonded on one main surface of the conductive substrate while placing a metal layer as a reflective layer in between; the light-emitting layer portion being covered

with a transparent conductive oxide layer, also available as a light-extraction-surface-side electrode, on the main surface thereof opposite to that facing to the conductive substrate; and further comprising a contact layer for reducing junction resistance of the transparent conductive oxide layer, disposed between the light-emitting layer portion and the transparent conductive oxide layer so as to contact with the transparent conductive oxide layer.

35. The light-emitting device as claimed in Claim 34, wherein the conductive substrate is an Si substrate or a metal substrate.

36. The light-emitting device as claimed in Claim 34, wherein the reflective layer is an Au-base metal layer.

37. The light-emitting device as claimed in Claim 36, wherein the conductive layer is an Si substrate, the reflective layer is an Au-base metal layer contacting with both of the light-emitting layer portion and the Si substrate.

38. The light-emitting device as claimed in Claim 37, wherein the transparent conductive oxide layer also available as the light-extraction-surface-side electrode is an ITO layer.

39. The light-emitting device as claimed in Claim 34, wherein the contact layer is composed of a compound semiconductor containing no Al at the junction interface with the transparent conductive oxide layer, and having a band gap energy of less than 1.42 eV.

40. The light-emitting device as claimed in Claim 39, wherein the compound semiconductor composing the contact layer has a composition of $In_xGa_{1-x}As$ ($0<x\leqq 1$) at the junction interface with the transparent conductive oxide layer.

41. The light-emitting device as claimed in Claim 34, wherein the transparent conductive oxide layer is formed as an ITO layer, and the contact layer is formed between the light-emitting layer portion and the ITO layer so as to contact with the ITO layer;

the contact layer having a composition of $In_xGa_{1-x}As$ ($0<x \leqq 1$) at the junction interface with the transparent conductive oxide layer, and having an In concentration profile continuously decreasing as receding from the ITO layer in the thickness-wise direction.

42. The light-emitting device as claimed in Claim 41, wherein the light-emitting layer portion is configured as having a double heterostructure in which a first-conductivity-type

cladding layer, an active layer and a second-conductivity-type cladding layer, all composed of $(Al_xGa_{1-x})_yIn_{1-y}P$ (where, $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$) are stacked in this order.

43. The light-emitting device as claimed in Claim 34, wherein a metal electrode for applying voltage to the light-emitting layer portion is formed on the main surface of the transparent conductive oxide layer opposite to that facing to the light-emitting layer portion, so as to cover a partial area of the main surface; and

the transparent conductive oxide layer has a primary region right under the metal electrode and the residual secondary region, and the contact layer is formed with an ratio of formation area larger in the secondary region than in the primary region.

44. The light-emitting device as claimed in Claim 43, wherein the contact layer is not formed in the primary region.

45. The light-emitting device as claimed in Claim 43, wherein at least formation area and non-formation area of the contact layer are interlaced in the secondary region.

46. The light-emitting device as claimed in Claim 34, wherein the light-emitting layer portion is bonded to the contact

layer on the main surface thereof opposite to that contacting with the transparent conductive oxide layer, while placing an intermediate layer in between, and the intermediate layer is composed of a compound semiconductor having a band gap energy intermediate between those of the light-emitting layer portion and the contact layer.

47. The light-emitting device as claimed in Claim 46, wherein the light-emitting layer portion is composed of $(Al_xGa_{1-x})_yIn_{1-y}P$ (where , $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$), and the intermediate layer is formed so as to contain at least any one of AlGaAs layer, GaInP layer and AlGaInP layer.

48. A light-emitting device comprising a transparent conductive semiconductor substrate, and a light-emitting layer portion composed of a compound semiconductor and bonded on one main surface of the transparent conductive semiconductor substrate; the light-emitting layer portion being covered with a transparent conductive oxide layer, also available as a light-extraction-surface-side electrode, on the main surface thereof opposite to that facing to the conductive substrate; and further comprising a contact layer for reducing junction resistance of the transparent conductive oxide layer, disposed between the light-emitting layer portion and the transparent conductive oxide layer so as to contact with the transparent

conductive oxide layer.

49. A method of fabricating a light-emitting device comprising:

a light-emitting layer portion growth step for epitaxially growing the light-emitting layer portion composed of a compound semiconductor on a light-emitting-layer-growing substrate;

a metal layer forming step for forming a metal layer on a first main surface side of the conductive substrate;

a bonding-use transparent conductive oxide layer forming step for forming a bonding-use transparent conductive oxide layer on the first main surface side of the light-emitting layer portion; and

a bonding step for bonding the conductive substrate and the light-emitting layer portion so as to allow the metal layer to contact with the bonding-use transparent conductive oxide layer,

where all steps are sequentially carried out in this order.

50. The method of fabricating a light-emitting device as claimed in Claim 49, wherein the bonding step is responsible for bonding between the bonding-use transparent conductive oxide layer and the metal layer.

51. The method of fabricating a light-emitting device as claimed in Claim 49, wherein, after the bonding, a portion of the

metal layer in contact with the bonding-use transparent conductive oxide layer is composed of an Au-base metal layer.

52. The method of fabricating a light-emitting device as claimed in Claim 51, wherein the bonding-use transparent conductive oxide layer is an ITO layer, and the portion of the metal layer in contact with the bonding-use transparent conductive oxide layer is an Sn-containing, Au-base metal layer.

53. The method of fabricating a light-emitting device as claimed in Claim 49, wherein the conductive substrate is an Si substrate, and the Si substrate is bonded to the light-emitting layer portion while placing the Au-base metal layer in contact with the Si substrate in between by bonding annealing at 80°C to 360°C, both ends inclusive.

54. The method of fabricating a light-emitting device as claimed in Claim 49, further comprising a contact layer forming step for forming a contact layer for reducing junction resistance of the bonding-use transparent conductive oxide layer on the first main surface side of the light-emitting layer portion prior to the bonding-use transparent conductive oxide layer forming step.

55. The method of fabricating a light-emitting device as

claimed in Claim 49, wherein, prior to the formation of the bonding-use transparent conductive oxide layer, a GaAs layer is formed on the first main surface side of the light-emitting layer portion, an ITO layer as the bonding-use transparent conductive oxide layer is then formed so as to contact with the GaAs layer, and the layers are annealed so as to diffuse In from the ITO layer into the GaAs layer to thereby form the contact layer composed of In-containing GaAs.

56. The method of fabricating a light-emitting device as claimed in Claim 55, wherein the conductive substrate is an Si substrate, the Si substrate is then bonded to the light-emitting layer portion while placing an Au-base metal layer in contact with the Si substrate in between by bonding annealing at 80°C to 360°C, both ends inclusive, and thereafter the annealing for diffusing In into the GaAs is carried out.

57. The method of fabricating a light-emitting device as claimed in Claim 56, wherein the annealing for diffusing In into the GaAs layer is carried out at 600°C to 750°C, both ends inclusive, for 5 seconds to 120 seconds, both ends inclusive.

58. A light-emitting device comprising a metal layer, a bonding-use transparent conductive oxide layer in contact with the metal layer, a light-emitting layer portion composed of a

compound semiconductor, and an electrode for applying voltage to the light-emitting layer portion sequentially stacked in this order on one main surface of a conductive substrate.

59. The light-emitting device as claimed in Claim 58, wherein a portion of the metal layer in contact with the bonding-use transparent conductive oxide layer is composed of an Au-base metal layer.

60. The light-emitting device as claimed in Claim 59, wherein the bonding-use transparent conductive oxide layer is an ITO layer, and the portion of the metal layer in contact with the bonding-use transparent conductive oxide layer is an Sn-containing, Au-base metal layer.

61. The light-emitting device as claimed in Claim 58, further comprising a contact layer for reducing junction resistance of the bonding-use transparent conductive oxide layer, disposed between the bonding-use transparent conductive oxide layer and the light-emitting layer portion so as to contact with the bonding-use transparent conductive oxide layer.

62. The light-emitting device as claimed in Claim 58, wherein the light-emitting layer portion is covered with an electrode-forming transparent conductive oxide layer, also

available as a light-extraction-surface-side electrode, on the main surface thereof opposite to that facing to the conductive substrate; and further comprising a contact layer for reducing junction resistance of the electrode-forming transparent conductive oxide layer, disposed between the light-emitting layer portion and the electrode-forming transparent conductive oxide layer so as to contact with the electrode-forming transparent conductive oxide layer.

63. The light-emitting device as claimed in Claim 62, wherein a metal electrode for applying voltage to the light-emitting layer portion is formed on the main surface of the electrode-forming transparent conductive oxide layer so as to cover a partial area of the main surface; and

the electrode-forming transparent conductive oxide layer has a primary region right under the metal electrode and the residual secondary region, and the contact layer is formed with an ratio of formation area larger in the secondary region than in the primary region.

64. The light-emitting device as claimed in Claim 63, wherein the contact layer is not formed in the primary region.

65. The light-emitting device as claimed in Claim 63, wherein at least formation area and non-formation area of the

contact layer are interlaced in the secondary region.

66. The light-emitting device as claimed in Claim 62, wherein the contact layer is composed of a compound semiconductor containing no Al at the junction interface with the transparent conductive oxide layer, and having a band gap energy of less than 1.42 eV.

67. The light-emitting device as claimed in Claim 66, wherein the compound semiconductor composing the contact layer has a composition of $In_xGa_{1-x}As$ ($0<x\leqq 1$) at the junction interface with the transparent conductive oxide layer.

68. The light-emitting device as claimed in Claim 62, wherein the transparent conductive oxide layer is an ITO layer; and

the contact layer has a composition of $In_xGa_{1-x}As$ ($0<x\leqq 1$) at the junction interface with the transparent conductive oxide layer, and has an In concentration profile continuously decreasing as receding from the ITO layer in the thickness-wise direction.

69. The light-emitting device as claimed in Claim 62, wherein the light-emitting layer portion is bonded to the contact layer on the main surface thereof opposite to that contacting

with the transparent conductive oxide layer, while placing an intermediate layer in between, and the intermediate layer is composed of a compound semiconductor having a band gap energy intermediate between those of the light-emitting layer portion and the contact layer.

70. The light-emitting device as claimed in Claim 69, wherein the light-emitting layer portion is composed of $(Al_xGa_{1-x})_yIn_{1-y}P$ (where , $0 \leqq x \leqq 1$, $0 \leqq y \leqq 1$), and the intermediate layer is formed so as to contain at least any one of AlGaAs layer, GaInP layer and AlGaInP layer.

71. A light-emitting device comprising a compound semiconductor layer having a light-emitting layer portion, of which first main surface being used as a light extraction surface, and a device substrate bonded to the second main surface side of the compound semiconductor layer while placing a main metal layer having a reflective surface for reflecting light from the light-emitting layer portion towards the light extraction surface side;

further comprising a diffusion-blocking layer, which is composed of an inorganic conductive material, and is provided for blocking diffusion of components derived from the device substrate into the main metal layer, interposed between the device substrate and the main metal layer.

72. The light-emitting device as claimed in Claim 71, wherein the diffusion-blocking layer is composed of a conductive oxide.

73. The light-emitting device as claimed in Claim 72, wherein the conductive oxide is ITO.

74. The light-emitting device as claimed in Claim 71, wherein the thickness of the diffusion-blocking layer is 1 nm to 10 μm, both ends inclusive.

75. The light-emitting device as claimed in Claim 71, further comprising a substrate-side bonding metal layer interposed between the diffusion-blocking layer and the device substrate so as to reduce junction resistance between the device substrate and the diffusion-blocking layer.

76. The light-emitting device as claimed in Claim 71, wherein the main metal layer is composed of an Au-base layer containing Au as a major component at least at the portion thereof including the interface with the diffusion-blocking layer, and the device substrate is an Si substrate.

77. The light-emitting device as claimed in Claim 76,

wherein the device substrate is an n-type Si substrate, and further comprises a substrate-side bonding metal layer which is composed of an AuSb alloy or an AuSn alloy, and is provided for reducing junction resistance between the Si substrate and the diffusion-blocking layer, interposed between the diffusion-blocking layer and the Si substrate.

78. The light-emitting device as claimed in Claim 76, wherein the Au-base layer forms the reflective layer.

79. The light-emitting device as claimed in Claim 76, further comprising an Ag-base layer containing Ag as a major component interposed between the Au-base layer and the compound semiconductor layer, and the Ag-base layer forms the reflective layer.

80. A method of fabricating a light-emitting device which comprises a compound semiconductor layer having a light-emitting layer portion, of which first main surface being used as a light extraction surface, and a device substrate bonded to the second main surface side of the compound semiconductor layer while placing a main metal layer having a reflective surface for reflecting light from the light-emitting layer portion towards the light extraction surface side; comprising the steps of:

forming a diffusion-blocking layer, which is composed of an inorganic conductive material, and is provided for blocking diffusion of components derived from the device substrate into the main metal layer, on the surface of the device substrate on the side to which the compound semiconductor layer is to be bonded;

forming the main metal layer on at least either one of the second main surface of the compound semiconductor layer, and the main surface of the diffusion-blocking layer formed on the device substrate; and

thereafter bonding the device substrate and the compound semiconductor while placing the diffusion-blocking layer and the main metal layer in between.

81. The method of fabricating a light-emitting device as claimed in Claim 80, wherein the device substrate and the compound semiconductor layer are stacked while placing the diffusion-blocking layer and the main meta layer in between, and subjected to bond annealing in this status to thereby bond the device substrate and the compound semiconductor layer.

82. The method of fabricating a light-emitting device as claimed in Claim 80, wherein the diffusion locking layer is composed of a conductive oxide.

83. The method of fabricating a light-emitting device as claimed in Claim 82, wherein the conductive oxide is ITO.

84. The method of fabricating a light-emitting device as claimed in Claim 83, wherein the thickness of the diffusion-blocking layer is 1 nm to 10 μm, both ends inclusive.

85. The method of fabricating a light-emitting device as claimed in Claim 80, wherein a substrate-side bonding metal layer for reducing junction resistance between the device substrate and the diffusion-blocking layer is formed in on the main surface of the device substrate, and the diffusion-blocking layer is formed on the substrate-side bonding metal layer.

86. The method of fabricating a light-emitting device as claimed in Claim 80, wherein the main metal layer is composed of an Au-base layer containing Au as a major component at least at the portion thereof including the interface with the diffusion-blocking layer, and the device substrate is an Si substrate.

87. The method of fabricating a light-emitting device as claimed in Claim 86, wherein the device substrate is an n-type Si substrate, and further comprises a substrate-side bonding metal layer which is composed of an AuSb alloy or an AuSn alloy, and

is provided for reducing junction resistance between the Si substrate and the diffusion-blocking layer, interposed between the diffusion-blocking layer and the Si substrate.

88. The method of fabricating a light-emitting device as claimed in Claim 80, further comprising the steps of:

disposing a first Au-base layer intended for becoming the main metal layer and containing Au as a major component on a bonding-side surface of the compound semiconductor layer, where the bonding-side surface being assumed as the main surface of the compound semiconductor layer opposite to that serves as the light extraction surface as a bonding-side surface;

disposing a second Au-base layer intended for becoming the main metal layer and containing Au as a major component on a bonding-side surface of the device substrate, where the bonding-side surface being assumed as the main surface of the device substrate intended for being located on the light-emitting layer portion side; and

bonding the first Au-base layer and the second Au-base layer under close contact.

89. The method of fabricating a light-emitting device as claimed in Claim 88, wherein an Si substrate is used as the device substrate.

90. The method of fabricating a light-emitting device as claimed in Claim 88, wherein the reflective layer is formed by the first Au-base layer.